Remarks/Arguments

Claims 1-14 are pending. The claims have been amended to correct obvious defects, and as such are not believed to raise new issues of patentability. No new matter is believed to be added by the present amendment.

Rejection of claims 1-4, 7-10 and 12-14 under 35 USC §102(b) as being anticipated by Tai, T., Gerla, M., "LAN interconnection; a transparent, short-path approach" IEEE International Conference on Communications, 23-26, June 1991, pages 1666-1670, vol. 3 (hereinafter, "Tai")

Applicants submit that Tai fails to disclose each and every limitation recited in the subject claims, and thus, present claims 1-4, 7-10 and 12-14 are not anticipated under 35 U.S.C. §102(b) by Tai as alleged by the Examiner.

The examiner's response states "[a]s shown in Fig. 1 on page 1667 is the forwarding database of a specific port is a brouter and which is implemented at each port of the brouter ... Thus, Tai is building a forwarding database (routing table) by using the Bellman-Ford Algorithm." The examiner further states that according to Tai the forwarding database at each port is constructed by exchanging the delay tables periodically among the brouters attached to the same LAN. However, applicants submit that even assuming arguendo that Tai teaches generating a forwarding database through periodic exchange of delay tables as alleged, Tai still fails to disclose or suggest all of the limitations of the present claims.

The present invention involves a method for building a routing table by performing an iterative process that includes exchanging routing table data between two portals of a bridge, concatenating received routing table data with the routing table data of a given portal, exchanging the routing table data between the portals connected to the same bus, and concatenating the received routing table data with routing table data of the given portal. In that regard, claim 1 recites:

(a) transmitting, by a given portal, routing table data stored by said given portal to a companion portal associated with said given portal and receiving, by said given portal, routing table data from the companion portal;

(b) concatenating said routing table data received in step (a) with the contents of the routing table data stored by said given portal;

(c) broadcasting said routing table data stored by said given portal on a local bus associated with the given portal;

(d) receiving routing table data broadcast by other portals on the local bus and concatenating said received routing table data broadcast by other portals with contents of the routing table data stored by said given portal;

(e) repeating the above steps until routing data concerning all buses in the network has been received by said given portal.

By contrast, the method of Tai for building a routing table involves the steps of building a delay table at each brouter, exchanging these delay tables between the brouters, and computing a routing table at each port based on the delay tables. Tai also addresses the different problem of determining a unique LAN id for each LAN, and building a mapping table between all station ids and their LAN id.

More specifically, Tai teaches "... The construction of the forwarding database is essentially a background process in the brouter, which will be discussed in section 2.2. Furthermore, the manipulation of station and LAN identifications as well as the migration of stations will be presented in section 3."

Paragraph 2.2 states in part, "more specifically, at brouter b, say, the tables $Delay_b(i)$ and $OutPort_b(i)$ are kept ..." and gives the algorithm to compute these tables : $Delay_b(i) = min_{b'}\{Delay_{b'}(i) + l(b, b')\}$. After computing the tables, each brouter b host its own $Delay_b(i)$ table. Then, an exchange of the Delay table occurs between brouters, e.g., "... the forwarding database at each port is constructed by exchanging the delay tables periodically ..." Once these delay tables have been received, the forwarding database is computed using the specified algorithm, e.g., "[a]fter receiving the delay tables, each port p, say, of brouter b calculates its own forwarding database indexed by destination LAN id as follows ..."

In view of the above, Applicants submit that the limitations recited in the present claims for determining the routing tables clearly are not disclosed or suggested by the steps described by Tai for computing the routing tables.

Claim 1 recites "... transmitting by a given portal, routing table data stored by said given portal to a companion portal associated with said given portal and receiving, by said given portal, routing table data from the companion portal." This limitation relates to an exchange of routing table data at the level of each bridge, particularly, **between the different routing tables located at each portal of the particular bridge**. Contrary to the Examiner's assertion, this limitation is not taught by Tai.

The Examiner asserts that page 1667 of Tai discloses this limitation (see 6-28-05 Office Action, page 6). However, the portion of Tai cited by the Examiner (§3.2) concerns an algorithm to build a mapping table and a scheme to broadcast a list of local stations on a LAN (obtained by intersecting the lists of station ids on all the ports which are directly connected to that LAN (inter-bridge)). Tai is not concerned with the exchange of routing table data at the level of each bridge between the different tables located at each portal of the particular bridge per claim 1. Applied to the context of Tai, this limitation of claim 1 would require an exchange in the brouter **between routing tables maintained at the port level of the brouter**. However, Tai clearly does not teach the exchange of data within the brouter, instead, Tai teaches the exchange of data **between ports of different brouters** on a connected LAN.

Tai clearly does not teach exchanging routing table data between ports of the same bridge (brouter) as recited in step (a) of independent claim 1, but rather teaches exchanging routing table data between ports of different brouters (bridges) that are connected on a LAN. Therefore, applicants submit that Tai fails to disclose or suggest the above-mentioned limitation of claim 1.

Furthermore, claim 1 recites "... concatenating said routing table data received in step (a) with the contents of the routing table data stored by said given portal." This limitation relates to the combining of routing table data in a given portal. Nowhere does Tai disclose or suggest the feature of combining

routing table data by ***concatenation*** in a given portal. The portion of Tai cited by the examiner as disclosing this feature, namely Column 1, page 1669, in fact teaches ***intersecting*** lists to obtain a list of stations ids on all ports that are directly connected to that LAN. Applicants submit that intersecting lists to obtain a list of station ids is different from concatenating routing table data, and that Tai simply does not mention or suggest the concatenation of table data as recited in claim 1. Therefore, applicants submit that Tai also fails to disclose or suggest at least this limitation of claim 1.

Moreover, claim 1 recites "... repeating the above steps by said given portal until routing data concerning all buses in the network has been received by said given portal." This provides that steps (a), (b), (c) and (d) are executed iteratively until a stop condition is present. A stop condition being that the routing table data concerning all buses has been received. This step is also not disclosed or suggested in Tai.

The Examiner cites page 1668, column 2, paragraph 3.1 of Tai as disclosing this step. This paragraph, however, provides "by periodically exchanging the concatenated ids among brouters attached to the same LAN, the up to date LAN id is determined and the master brouter is elected." This passage means that a process of electing the minimum id as the LAN id is **conducted periodically to adapt to changes in the network**, for example, for brouter failure. This passage has nothing to do with conducting an iterative process of building a routing table until a stop condition exists. Therefore, applicants submit that Tai does not disclose or suggest the iteration feature as recited in step (e) of claim 1.

In summary, Tai teaches a system that builds delay tables, exchanges the delay tables and computes the routing tables from the delay tables. This process is completely different from the method of the present invention, which involves exchanging routing tables and concatenating the exchanged routing tables in an iterative process to generate the routing tables. Applicants further submit that even in view of the examiner's response in the outstanding office action, the present claims are not anticipated by Tai because Tai fails to disclose or suggest

each and every limitation of claim 1 as discussed above. Claims 2-4, 7-10 and 12-13, which depend from claim 1 are believed to be not anticipated by Tai for at least the same reasons as those applied to claim 1. Independent claim 14 recites the features of independent claim 1 in apparatus form, and as such, applicants submit that claim 14 is not anticipated by Tai for at least the same reasons as those discussed above.

Rejection of claims 5 and 6 under 35 USC §103(a) as being unpatentable over Tai and further in view of Garcia (US Published Application 20020049561)

Garcia is cited as teaching that the routing table data transmitted or broadcast by a given portal contains the entire routing table.

However, even assuming arguendo that Garcia teaches the above, applicants submit that the alleged teachings still fail to cure the defect of Tai as applied to claim 1 as discussed above. Thus, applicants submit that claims 5 and 6, which depend from claim 1, are patentably distinguishable over the combination of Tai and Garcia.

Rejection of claim 11 under 35 USC §103(a) as being unpatentable over Tai and further in view of Oechsle (US Pat. No. 5570466)

Oechsle is cited as teaching selecting the path to a given remote bus as a function of the bandwidth of portals on the path.

However, even assuming arguendo that Oechsle teaches the above, applicants submit that the alleged teachings of Oechsle still fail to cure the defect of Tai as applied to claim 1 as discussed above. Thus, applicants submit that claim 11, which depends from claim 1, is patentably distinguishable over the combination of Tai and Oechsle.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, entry of this amendment, reconsideration, withdrawal of the final rejection and allowance of all claims are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at (609) 734-6815, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Respectfully submitted,
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Date: Sept. 12, 2005

CERTIFICATE OF MAILING

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop AF, Commissioner for Patents, Alexandria, Virginia, 22313-1450 on:

9-13-05
Date

Linda Jundall